Cost-Benefit Handbook for Wisconsin Regulatory Agencies

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This handbook provides an overview of the key elements of a comprehensive cost-benefit analysis. This handbook is intended to give regulators a feel for the range of issues they should contemplate and assess as part of a comprehensive cost-benefit analysis. This handbook was developed by the New York Governor's Office of Regulatory Reform that included input from various inter-agency New York governmental agencies and whose primary researcher has over 30 years experience as an economist. While this level of sophistication may not be necessary or justified for every proposed rulemaking, generally speaking the greater the impact of a regulation on small business and the overall Wisconsin economy, the more important it becomes to fully document the need for the exercise of government regulatory power. It is not a "guidance document" or a prescription of exactly how every cost-benefit analysis must be performed but an aide to assist agencies in exercising their best judgment in an informed way.

I. COSTS OF PROPOSED REGULATIONS AND ALTERNATIVE ACTIONS

The challenge of accurately estimating the costs of proposed regulations varies greatly by the program area being regulated and the type of regulatory action being recommended. The more far reaching a regulation, the greater the need for a comprehensive determination of costs. This following information will detail vital components of a thorough cost estimate.

KEY ELEMENTS OF COST ESTIMATE

There are some fundamental functions that agencies must perform to ensure a good cost analysis. These actions include:

1. Estimate who is directly regulated and affected by the proposed regulation and any alternative actions considered.

2. Describe the types of direct compliance costs to be incurred by affected parties because of the regulation.

3. Estimate expected typical average compliance costs, and, if appropriate, a high and low range of direct compliance costs for entities to be regulated.

4. Present the total direct compliance costs for all affected entities in Wisconsin.

5. Estimate and present the cost to state and local agencies of developing, implementing, monitoring, and enforcing the proposed regulation.

WHO IS AFFECTED

The first important step in cost assessment is the accurate determination of who is affected by proposed regulations.

1. Information on the number of and types of entities directly subjected to proposed regulations and alternative actions considered should be presented, perhaps grouped as follows:

    a. total, all business entities;
    b. total, small business entities;
    c. total, non-profit organizations;
    d. total, households and/or number of people; and,
    e. total, state government and all other governmental jurisdictions.

2. Within the above major groups, important subgroups subjected to the regulations also should be identified. For businesses, the Standard Industrial Classification (SIC) system could be used, unless other certifications or identifiers are more applicable or appropriate.

   Additional geographic detailing by county, region, or regulated market may be used to show any special considerations of businesses affected by the proposed regulations.

3. All information and reference sources used by an agency to develop its selection of affected entities should be fully disclosed, thoroughly documented, and accurately dated.

DESCRIPTION AND ESTIMATES OF REGULATORY COSTS

After the number and types of affected parties are determined, the types and amount of costs imposed on those parties by the proposed regulations should be determined. These costs could be portrayed in the analysis as follows:

1. Incremental regulatory compliance costs should be identified and grouped into the following major categories, as applicable:

   a. capital costs (list separately land, structures and equipment);
   b. ongoing operational costs (include separately labor, materials, energy costs and purchased services);
   c. ongoing transaction costs, which reflect the time and value to do paperwork and other administrative compliance by businesses subject to the regulations; and
   d. any start-up compliance costs, which may not be captured in any of the above categories.

2. Expected average compliance costs for applicable capital and other major cost items for typical regulated businesses should be identified. Ranges of total compliance costs to be faced by regulated businesses should be listed when it is inappropriate to typify the affected parties such as when large, medium, and small businesses each may face different compliance costs. In these cases, expected average costs should be identified for each appropriate subgroup of the affected population.

3. Incremental administrative costs to the implementing agencies and other agencies that have regulatory and enforcement oversight should be identified.

4. Compliance costs should be totaled based upon a “typical” average cost or expected range of compliance costs (or any other acceptable methodology) and the number of businesses affected by the regulations. Aggregate compliance costs should be developed for the major types of costs (i.e., capital, operational) as well as a schedule for when these

5. costs are expected to be incurred. If appropriate, this data should be totaled by geographic regions, as well.

Extensive use of published and unpublished technical sources, government experts, the regulated community, and academic and private sector sources is strongly recommended to help develop accurate estimates of compliance costs. If agency estimates of compliance costs substantially differ from estimates provided by regulated parties, such differences should be disclosed.

OTHER COSTS TO CONSIDER

Other costs to consider include: the ability of regulated parties to pay for the compliance costs associated with the proposed regulations; cash-flow and other financial problems that could be inflicted upon regulated businesses as a result of the proposed regulations; marketplace effects, including limited entry and decreases in competitiveness; and effects the implementation of the regulation would have on employment, the price of goods and services, and consumer choices. Not all of these factors (e.g., ability to pay) would necessarily be included in an overall tabulation of costs and benefits, but these should be noted nonetheless.

Ability to Finance Compliance Costs

Once the magnitude of capital costs that will be imposed by the proposed regulation is determined, an analysis should be performed of the capabilities of regulated entities to either internally or externally finance these capital costs. Estimates of the number, percentage, and type of entities that are likely to have difficulties in financing the capital compliance costs should be identified. In preparing estimates of compliance costs, the agency should indicate whether the adaptive capabilities of the regulated parties may lead to lower-than-expected costs.

Financial Hardship

The nature and severity of any financial difficulties beyond those estimated for the financing of capital costs also should be assessed. These difficulties can include such problems as restricted cash flows as a result of the proposed regulation, or adverse effects on profit margins. For businesses that operate on narrow profit margins, limited cash flow, or other restrictions (such as seasonally-sensitive finances), sweeping regulatory impositions may impose drastic financial hardships.

Competitiveness of Enterprises and Sectors

An assessment should be conducted to determine if proposed regulations will adversely affect the costs and quality currently experienced in the production and distribution of products, goods, and services by either private enterprises or government entities. Similarly, any adverse effects on markets, customers, or recipients of government services also must be determined. The nature and severity of such effects need to be stated clearly in the impact analysis. Particular

attention should be given to assessing adverse competitive effects relative to comparable enterprises in other states. Finally, any adverse effects on the advancement of technological innovations should be estimated.

Barriers to Entry and Expansion

Effects of the proposed regulations on the ability of new enterprises to start-up or on existing ones to expand should be analyzed. Such barriers include, but are not limited to, additional licensing or educational requirements, new mandatory permits or regulatory procedures, and increased documentation or reporting requirements. The impact and costs of time delays caused by the proposed regulation should be discussed, as well.

Employment Effects

An assessment of adverse effects on jobs within the affected regulated entities should be performed. Adverse employment effects can result from, among other things: (1) production and operational changes required by the regulations; (2) any requirement that increases the cost of doing business in general or labor costs in particular; and (3) the close-down of businesses as a result of the company's inability to financially (or otherwise) comply with the proposed regulations.

Any potential job loss should be stated explicitly and prominently in an agency's regulatory cost analysis.

GENERAL GUIDELINES

In summary, agencies should follow the set of guidelines below when undertaking this exercise in order to develop a thorough and accurate cost analysis:

1. Cost estimates should be stated in terms of incremental or marginal annual costs over the period covered by the proposed regulation, representing the changes in costs compared to the status quo. Future costs not directly attributable to the enactment of the proposed relation and related costs incurred by the affect party prior to the enactment of the regulation, should be excluded from the analysis.

2. Any "opportunity costs," such as loss of time and benefits foregone, should be described and estimated where significant. Also, significant transfer costs or payments need to be described. These are gains or losses to some that are offset by gains or losses to others. They represent no net social benefit or cost.

3. Ranges of high and low costs imposed on regulated businesses by the proposed regulation, in addition to the expected costs, should be presented if there is uncertainty, if information sources used in the development of cost estimates cite significant differences in cost

4. estimates, or if there is a substantial difference in how the regulation affects subgroups of the affected population.

5. Incremental costs that are known but which, in an agency's determination, cannot be accurately or quantitatively calculated, should be explained. An example of such costs are those imposed by a regulation that may slow the rate of technological innovation.

6. Final cost of estimates should be presented in constant dollars, and the base year should be as close to the calendar year of the analysis as possible. Documentation on the conversion of any current dollar information to constant dollars also should be provided.

7. Total costs incurred by state agencies due to the development, implementation and enforcement of the proposed regulation should be calculated and presented as an annual cost of the regulation.

8. Agencies should consider any effect that changing the deadline for mandatory compliance with the proposed regulation and altering the level of stringency of the regulation may have on costs incurred by affected parties. Other cost-lessening options include grandfathering, staged implementation and payment of compensation.

9. Other regulatory flexibility factors should be incorporated into the cost analysis, including the effects of using market-oriented solutions and performance standards as compared to design or operational standards.

10. Assumptions made by the agencies and research sources used by agencies should be clearly cited and thoroughly documented. The existence of differing cost estimates that an agency chooses not to use in it's analysis should also be noted.

II. DEFINING AND MEASURING BENEFITS OF PROPOSED REGULATIONS

Government economic and social regulations are designed with the intention of providing some sort of benefit. For example, some regulations try to ensure greater levels of public health and safety. Others are created to protect the land, water and air from pollution and other undesired uses. Whatever the case, it is important for agencies to clearly define and measure—and for the public to accurately understand – the benefits of proposed government regulations.

TYPES OF BENEFITS

Many of the benefits from government regulations generally can be grouped into one of the following major categories: (1) public health and safety; (2) occupational health and safety; and (3) environmental protection and natural resource management. Other often-seen benefit categories include: economic and operational efficiency, consumer protection and benefits and personal rights.

BASIS AND QUANTIFICATION OF BENEFITS

When proposed regulatory actions affect public or occupational health, safety or environmental protection, agencies should incorporate a formal risk assessment as part of their benefit analysis. Even in instances where the regulatory change is judged to be relatively small, and therefore an agency determines that a quantitative risk assessment is impractical, the agency must provide sufficient evidence that the proposed regulatory actions will successfully address significant problems that cannot be adequately addressed otherwise.

Risk assessments should include data within the following general benefit categories, when appropriate:

- Human health, safety and environmental safety
- Other impacts on humans (Example: recreational uses of ecological systems, amenities, including non-use values; visibility, noise, etc.)
- Market-related economic productivity of ecological systems (Example: commercial agriculture, forest or fishing activities)
- Ecological stability and biodiversity (Example: wetland guidelines, species protection)
- Economic productivity (Example: administrative flexibility; reduction in paperwork)
- Protection of public and private capital infrastructure (Example: Land, equipment, structures)

Because of the complexity and traditionally controversial nature, methods to quantify health, safety and environmental benefits are discussed later in greater detail. However, all benefit analyses should contain certain key components. .

KEY COMPONENTS OF BENEFIT ANALYSIS

1. Agencies should describe and quantify the expected incremental benefits that would result from implementation of proposed regulations. If the regulations have distinguishable components, each element's expected benefits also should be separately tabulated. The benefit analysis also should include data on the incremental benefits that would likely occur for alternative regulatory strategies and other options that have been evaluated but not selected for adoption. These incremental benefits are both the quantifiable and non-quantifiable benefits in such areas as health, safety, environmental protection, consumer protection, economic efficiency, and quality of life that are expected to result from the effects of the regulations as compared to the status quo or taking no action.

2. Agencies should document the scientific, technical and physical basis cited for the incremental benefits that are expected to accrue to affected parties because of the enactment of the regulation.

3. A range of incremental benefits estimates that include high and low values should be presented, particularly if there are uncertainties, differences in technical sources consulted by the agency, or substantially different impacts of the proposed regulation on various subgroups of the affected population. Documentation of studies or analyses describing these differences should be summarized clearly and referenced thoroughly. An agency's own assessment of these differences also should be included as part of this analysis.

4. Thorough documentation and analysis describing the recipients of any expected direct or indirect benefits should be provided in the benefits discussion. To the greatest extent possible, this data should include the number and type of entities expected to benefit from the regulation, categorized appropriately.

5. Uncertainties concerning the timing, probabilities and range of benefits should be carefully identified and disclosed.

III. MEASURING HEALTH AND ENVIRONMENTAL BENEFITS

Quantifying the public health, occupational health and the environmental benefits of a proposed regulation is highly complex, involving a number of assumptions and estimations as well as analyses of data from highly technical studies. Because of this complexity and the uncertainties in predictive models, the analyses of benefits are controversial.

Typically, the purpose of proposed public health and environmental regulations is to reduce or eliminate risks, either to human health or to the quality of the environment. The first step in regulatory action in these areas, therefore, should be to assess qualitatively (1) whether a risk exists, and (2) if so, is the risk acceptable. If an unacceptable risk exists, agencies should analyze how and by what amount the proposed regulations will reduce this risk. State agencies also have the obligation to indicate whether the risk is already being, or could be addressed, by private action, by existing statutes, or by existing federal or local regulations.

RISK ASSESSMENT

A risk assessment is a systematic approach to organizing and analyzing scientific knowledge and other information. It identifies possible adverse human health or environmental effects which may occur because of exposure to an agent (chemical, microbiological, physical hazard, etc) or an activity (skiing, climbing a ladder, etc). It also estimates the likelihood of the effect occurring under specified conditions.

Before regulatory action is taken, a state agency must establish, using a scientifically valid risk assessment, that by regulating a substance or activity an unacceptable health, safety or environmental risk can be reduced or eliminated. Unfounded intuition or anecdotal accounts do not provide sufficient analysis. A full risk assessment is not needed for every regulatory action. A simple screening-level risk assessment can identify minor risks. More stringent and detailed analysis will be expected for proposed regulations that impose significant costs on affected parties.

An agency's risk assessment should reference and rely on scientifically valid, peer-reviewed data and methodologies. If other data or methodologies of similar reliability and quality exist, an agency may choose to use such sources in addition to peer-reviewed data, but should justify doing so.

Often, the credibility of a risk assessment that underlies an agency's proposed regulation will be strengthened if it is subject to outside peer review by experts in the relevant field. This is not always possible for every regulation, however, often because of cost and timeliness reasons, but such peer review should be pursued for any proposed regulation that would have a major impact on individuals, businesses, or the economy in general.

To make sure a clear link is established between the proposed regulation and the identified risk, agencies proposing regulations should ensure that the risk assessment provides the following:

1. An explanation of how the proposed regulations address the identified risk;

2. An estimate of any increased risks that might result from the proposed regulation; and

3. A review of the existing safeguards that are in place and explanation of what gaps, if any, the proposed regulation will fill.

A risk assessment generally has four steps: hazard identification, dose-response assessment, exposure assessment and risk characterization.

Hazard Identification (*The determination of whether a particular substance or a particular activity is or is not casually linked to a particular health, safety, environmental or ecological effect.)*

The hazard identification portion of a risk assessment identifies the specific effects (disease, injury, death, etc) that may be caused by exposure of people or the environment to a particular substance or activity. It identifies the conditions (route of exposure, amount of exposure, type of habitat, working conditions) under which the effects might occur.

Hazard identification is a qualitative description but should be as specific as possible, depending on factors such as the kind and quality of available data on humans, laboratory animals or the environment, the availability of ancillary information (e.g., similarity to other chemicals, viruses or physical hazards) from other studies and the weight of the evidence from all of these data sources.

Hazard identification in the environmental area, for example, could include the following information: nature of effect, conditions under which it will occur, how long it could occur, who or what could be affected, how it could change the use of a resource and whether it is reversible.

Dose-Response Assessment (*The determination of the quantitative relationship between the exposure to a particular substance or activity and the incidence or severity of the effect.*)

In many instances, the severity of an effect or the number of people (or plants, animals, etc.) affected varies by dose. Many substances (for example, aspirin, salt or water) are perfectly safe if used as directed in small or moderate doses, but lethal in high doses.

Events, in addition to substances, also can have a dose-response relationship. For example, earthquakes of moderate intensity present no problem, but can cause much damage and many deaths at higher intensities.

Providing information on how responses change as the amount of exposure to a substance or activity changes is crucial to determining the benefits of the proposed regulation.

Exposure Assessment (*Determination of the amount, duratuion and frequency of actual or hypothetical exposure of people, organisms, or the environment to a substance or an activity that can affect health, the environment, or the ecosystem.)*

Exposure assessment involves specifying the populations that are or may be exposed to a substance or activity, identifying the ways each of these populations may be exposed, and estimating the magnitude, duration and frequency of exposure. The populations that may be exposed and all of the factors may vary under different regulatory options. Specifying the population at risk may include: the number of people (or animals, etc.), their age, sex and racial distribution, socio-economic status and health status. The ways people can be exposed include skin contact, inhalation or ingestion of a substance, having a medical x-ray, climbing a ladder and many other activities. The environment can be exposed to greenhouse gases, vehicle emissions, etc.

For example, in assessing the exposure of a person to a chemical in air, quantitative information or estimates are needed on the amount (concentration) of the chemical in the air, the persons' inhalation rate, how long the exposure lasts, and how frequently it is repeated. The exposure assessment is sometimes based on hypotheses or estimates about possible activities. It is essential to provide an explanation of and rationale for all assumptions, uncertainties, and data bases used in the assessment, for existing conditions and under each proposed regulatory option.

In addition to human exposure, agencies may need to assess exposure for risk involving the following: surface water (quality, quantity, sediment, drainage patters and flow, etc.); groundwater (quality, quantity, etc.); air (quality, acid rain, ozone depletion, etc.); plants, vegetation and crops (threatened, endangered or rare species, individual species, distribution and diversity, productivity, etc.); fish and wildlife (threatened, endangered or rare species, individual organisms, population, etc.); habitat; lands and forests; and ecosystem functions.

Risk Characterization (*The description of the nature and often the magnitude of the health, safety or environmental risk, including attendant uncertainties.*)

Risk characterization combines information from hazard identification, dose-response assessment and exposure assessment. It describes what is likely to happen to people and the environment.

Equally important as the prior three steps in risk assessment is the agency's presentation to the public of the nature and magnitude of the risk that the agency seeks to mitigate. Presenting complicated data and scientific research is not easy. The challenge to the agency is to do so in a way that is easy to understand and transparent.

At a minimum, the risk characterization should contrast the level of the health, safety, or environment risk that would occur given baseline conditions with the level of risk that would occur under alternative regulatory options. If the risks vary by population, geography, or other risk

factors, these should be explained fully. The risk characterization also should place the risk the agency seeks to mitigate in the context of what is generally considered as unacceptable risk.

The risk characterization also should place the risk the agency seeks to mitigate in the context of other risks that the agency addresses. Information also should be provided on the everyday risks that the average person might confront (e.g., driving a car, dietary effects, etc.).

The uncertainties in risk assessment derive from uncertainties in three of the four component steps: hazard identification, dose-response assessment, and exposure assessment. Uncertainties in hazard identification can arise from a lack of information about the hazards associated with a new chemical or activity, from inconsistent or conflicting results of toxicological or epidemiological studies, and from differences in the types of studies that are conducted.

Exposure assessment, often requires the use of assumptions and mathematical models which introduce uncertainty in the estimate of human exposure to a chemical or other hazard. In many cases, a useful way to represent the combined effect of all of these uncertainties on the characterization of risk is to express the various parameters in terms of ranges of probable values, rather than as definite numerical values.

Risk Management

Risk Management is the process of integrating the results of risk assessment with other information to make decisions about the need for, method of and extent of risk reduction. Risk assessment provides information about one of several factors that must be considered in deciding whether regulatory action is warranted. Policy considerations derived largely from statutory requirements dictate the extent to which risk information is used in decision-making and the extent to which other factors, such as technical feasibility, costs and offsetting benefits, play a role. In the risk management process, the agency weighs the risks, benefits, costs, technical feasibility, social acceptance and statutory requirements pertaining to the proposed action and decides the best option.

The two steps, risk management and risk assessment, should not be confused. Just because a problem has been identified and documented should not necessarily lead to the conclusion that a proposed regulation is the correct solution. To make sure there is a clear link between the proposed regulation and the identified risk, agencies proposing regulations should provide the following:

- A discussion of alternative approaches to reducing the environmental or health risk, and an explanation of why the recommended regulation was chosen and why the agency views it as the best option available; and
- Documentation that the regulation is appropriately tailored to respond to the identified risk and does not amount to either an insufficient step or overkill.

Other Environmental and Health Benefits

Most major environmental and health laws are intended to address specific risks. Among these are:

- Clean Air Act
- Clean Water Act
- Resource Conservation and Recovery Act
- Comprehensive Environmental Response, Compensation and Liability Act
- Safe Drinking Water Act
- Insecticide, Fungicide and Rodenticide Act
- Toxic Substance Control Act
- Endangered Species Act
- Emergency Reporting and Community Right-to-Know Act
- Occupational Safety and Health Act.

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IV. COMPARING REGULATIONS = COSTS AND BENEFITS

The final steps in cost-benefit analysis are the following:

1. Summarize and compare the aggregate costs in relationship to the overall benefits of the proposed regulations and the alternatives considered;

2. Evaluate the overall impacts of the regulations;

3. Discuss issues that are outside the traditional bounds of criteria underlying cost-benefit analysis, but which have a bearing on the merits of the proposed regulations.

The final component of the analysis should be designed to provide rulemakers and reviewers with concise quantitative and qualitative information to support decision-making regarding the overall merits, both pros and cons, of the proposed regulations and alternative actions.

SUMMARIZING AGGREGATE COSTS

Aggregate costs of proposed regulations should be presented as follows:

1. Total constant dollar costs estimated for implementing the proposed regulations and any alternatives should be shown on an annualized basis in chart or tabular formats. A summary of the major cost elements also should be presented in concise narrative. If cost ranges have been developed, they should be included along with important geographic dimensions of these costs.

2. Any cost elements that have not been quantified, but which are significant, should be clearly stated and discussed. Where costs cannot be precisely annualized, time frames of when such costs will be incurred should be included.

SUMMARIZING AGGREGATE BENEFITS

The benefits identified and estimated to be achieved should be presented as follows:

1. Quantified and totaled benefits should be presented in chart or tabular form on an annualized basis. Where developed, ranges of benefits should be shown. Significant geographics and demographic dimensions also should be included. Whatever supporting narrative is necessary should be as concise as possible.

2. Non-quantified benefits also should be listed by category, in a chart if possible, with geographic and demographic impacts included.

3. Benefit categories should be separately identified in terms of: (a) public health and safety; (b) occupational health and safety; (c) environmental and natural resource protection; and (d) any other appropriate categories.

EVALUATING THE OVERALL REGULATORY IMPACTS

The quantitative and qualitative aggregate statewide costs in relationship to overall benefits should be presented in appropriate chart and narrative form. The narrative should include a statement of findings regarding the *net* benefits of the regulations.

Agencies should provide separate net benefit calculations for each major element of the regulation, or for the attainment of different benefit levels. Agencies should consider giving consideration to the individual aspects of the regulation that impose incremental costs that exceed the incremental associated benefit. The agency should use cost-benefit to help answer the questions: Where do we stop? To this end, agencies should make separate cost-benefit calculations for discrete components of the proposed regulation as well as identifying the incremental costs and benefits of different levels of the regulation. These steps will better enable the agency to identify the weaknesses in a proposed regulation from a cost-benefit perspective.

An agency should compare and disclose the relative costs and benefits of each of the major regulatory options it considers.

COST EFFECTIVENESS AND COST-UTILITY ANALYSIS

Cost effectiveness analysis (CEA) and cost-utility analysis (CUA) are typically used in situations where it is difficult, impractical or inexpedient to determine the benefits of alternative programs or regulations. Examples include: improvements in the quality of life of individuals or a population, a better environment or reduced probability of death. With both CEA and CUA costs are measured in monetary terms. The approaches are often employed when comparing alternative programs or regulations for achieving a particular goal. Cost effectiveness analysis employs a ratio analysis approach for ranking alternative programs or regulations.

FULL DISCLOSURE OF DATA SOURCES, ASSUMPTIONS AND LIMITATIONS

To enable the public and rulemakers to assess the quality of an agency's cost-benefit analysis and the conclusions the agency reached, the agency should "fully disclose important assumptions and major points of uncertainty." Wis. Stats. 227.14(2m) requires that "each agency shall, in cooperation with the Department of Administration, ensure the accuracy, integrity, objectivity and consistency of the data that is used when preparing a proposed rule and when completing an analysis of the proposed rule under sub (2)." Full disclosure will add to the quality and the thoroughness of public comments on the proposed regulations, and will help provide the firmest foundation upon which rulemakers can enact the most appropriate public policies.

V. Data Sources for Analysis

When possible, cost-benefit analyses should use official data, estimates, and projections. When official data are not used, analyses should explain why official data were not representative of the regulatory target businesses and why the data chosen to be used provided a better measurement. Listed below are several helpful sources of data that can be used in the development of cost-benefit analyses. These sources provide a fairly comprehensive research foundation for agency regulators.

Where to Start

U.S. Census

Begin by reviewing general information sources before assuming that the answers to questions will require significant amounts of research. A good general source of information is from the US Bureau of Census listed below:

- **US Census Website -** http://www.census.gov/econ/census02/
- ***Census of Population -*** This database provides detailed characteristics for the population and housing units in state, counties, cities and towns, giving data by age, sex, race, education, occupations. http://www.census.gov/popest/estimates.php
- ***Census of Manufacturers -*** This database covers all manufacturing establishments, by state and identifies specific manufactured products by NAICS Code. http://www.census.gov/prod/ec97/97numlist/97numlist.html
- ***Census of Retail and Wholesale Trade -*** This database provides information by state, SMSA and non-metropolitan areas for over 100 different types of retail enterprises. Includes data on employment, wages, and receipts. http://www.census.gov/econ/www/retmenu.html
- ***Census of Service Industries -*** This database covers many business and consumer service industries such as engineering firms, hotels, recreation services. Statistics are presented by geographic area and industry. http://www.census.gov/econ/www/se0200.html
- ***Census of Health and Social Service Assistance -*** This database is comprised of establishments providing health care and social assistance for individuals. http://www.census.gov/epcd/www/97EC62.HTM
- ***Census of Construction Industry -*** Tabulates and publishes the dollar value of residential improvement and repair work each quarter. The Census of Construction Industries, taken every five years, provides the most comprehensive overview of the construction industry available. http://www.census.gov/const/www/#

- ***Census of Agriculture -*** These databases provide detailed statistics on farms, farming, ranching and related agricultural activities at the national, state and county level. http://www.nass.usda.gov/census/ and http://www.usda.gov/nass/
- ***Small Business Data -*** This database provides data on businesses with no paid employees; for example, a "Mom & Pop" corner store or someone operating a business out of their home. http://www.census.gov/epcd/nonemployer/index.html
- ***American FactFinder*** - This database is a source for population, housing, economic and geographic data. http://factfinder.census.gov/home/saff/main.html?_lang=en
- ***2002 Business Expense Survey -*** Provides periodic national estimates on operating expenses for merchant wholesale, retail trade, and selected service industries. http://www.census.gov/csd/bes
- ***NAICS – North American Industrial Classification System*** - You can obtain data for a specific NAICS industry. You can find data on payroll, establishment, sales receipt, etc. for a specific NAICS industry. http://www.census.gov/epcd/www/naics.html
- ***Business Help Site -*** This US Census site is designed to provide information for businesses to aid completion of surveys and forms. http://help.econ.census.gov/BHS/ASM/About.html
- ***Wisconsin QuickFacts*** - QuickFacts tables are summary profiles showing frequently requested data items from various Census Bureau programs. http://quickfacts.census.gov/qfd/states/550001k.html

Wisconsin State Data

Another good starting point is the Wisconsin State Data Center. It is composed of two organizations: Demographic Services Center in the Department of Administration (Lead Agency) and the Applied Population Laboratory at the University of Wisconsin-Madison (Coordinating Agency). The two organizations provide census data technical support to a network of 39 affiliates, other governmental agencies, and the general public. Labor and Income Characteristics can be found at: http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=379.

The Wisconsin Department of Workforce Development, Office of Economic Advisors can be used for official employment and establishment data. The Office assists economic data users to better understand the relationships between labor markets and other economic and demographic specifics. The Office helps users interpret labor force data and focus on the issues and trends influencing employment growth in the State of Wisconsin. Contact the Office of Economic Advisors with specific questions regarding your data analysis needs (http://www.dwd.state.wi.us/oea). Listed below are some of the data reports developed by the Office of Economic Advisors.

- **County Workforce Profiles -** Provides snapshots of the labor market in every Wisconsin county - http://www.dwd.state.wi.us/oea/cp_pdf/cp_mainx.htm

- **Workforce Development Area Profiles** - Includes analysis of the area's industry and occupation projections, current industry employment and wages, personal income, and current and projected labor force participation of the area's population - http://www.dwd.state.wi.us/oea/wda/wda_profiles.htm
- **Geographical Matrix** - Provides a quick view of data sets that are available on similar subjects for cities, counties and regions in Wisconsin. The matrix includes links to data sets for population, employment, largest employers, plant closings, per capita personal income, poverty estimates, wages and more. http://www.dwd.state.wi.us/oea/data_geo.htm
- **Top 100 Employers by County and Workforce Development Area** - Establishments and employment ranges included in these lists are based on unemployment insurance payroll tax reports for the quarter that ended December 2004. http://www.dwd.state.wi.us/oea/employer_information.htm
- **Employment by Industry Data** - http://www.dwd.state.wi.us/oea/employment_by_industry.htm
- **Wage Information by Occupation or Industry** – http://www.dwd.state.wi.us/oea/wages.htm
- **Employment Projections by Region** - http://www.dwd.state.wi.us/oea/employment_projections.htm

State and Federal Tax Data

Both the Internal Revenue and Wisconsin tax data is subject to confidentiality restrictions. However, some aggregated data may be available. The Internal Revenue Service has aggregated data on corporate tax returns by SIC-code.

- **Corporation Data by Sector or Industry** - http://www.irs.gov/taxstats/bustaxstats/article/0,,id=96388,00.html

Various organizations throughout the IRS compile data concerning the number of returns filed. Each year data are published and made available to the public. Much of these data are published by fiscal year, however, historical tax data is also available, as well as projections of returns to be filed in the future.

- **Tax Statistics: Collecting Revenue -** http://www.irs.gov/taxstats/compliancestats/article/0,,id=97168,00.html

It is important to know that, in some industry categories, tax information is not comprehensive because some industries pay the majority of tax under one section of the tax law while others pay under different sections of the tax law. Also, information is collected by individual payee, and it is not always possible to determine what an industry has paid on purchases as opposed to sales.

The Wisconsin Department of Revenue has economic documents and policy analyses, and informational and statistical reports relating to the Wisconsin economy, Wisconsin's state and local tax system, state aid programs for local governments, and tax relief for individuals. Including the following reports:

- **Manufacturing** - http://www.dor.state.wi.us/report/m.html#manuf
- **Economic Development** - http://www.dor.state.wi.us/report/e.html#dev

Agency-Specific Data Bank

A number of state and federal agencies collect information on businesses which fall under their regulatory purview. For example, the Department of Regulation and Licensing, manages many state health and business professional licensing programs, has lists of establishment and professionals licensed to operate in Wisconsin. Individual agencies should be contacted on such business specific data. The Licensing and Permitting website at www.wi.gov will provide you with the name of the regulatory agency for a specific type of permit, license or registration.

Library Data Resources

- **The Library of Federal Depository** - Provides access to all Federal documents and reports. The GPOAccess Resources has resources on business and the economy pertaining to a broad topic area. http://www.gpoaccess.gov/topics/business.html

- **ReferenceUSA** - Provides directory information for about 12 million U.S. businesses of all sizes. Search by phone number, address, CEO, estimated sales and much more. You will need to access this information using your library card number. http://www.scls.lib.wi.us/cgi-bin/auth.cgi?connectto=RU

- **Librarians -** Nationwide librarians are waiting to answer your questions. They'll chat and visit web pages with you to answer your questions. After your session, you'll receive a complete transcript (if you provide your email address) and you'll immediately see a list of links you visited. http://www.askaway.info/

Other Data

- **Thomas Register** is the most comprehensive free resource for industrial information, products, services, CAD drawings, and more. http://www.thomasnet.com/

- **Dun & Bradstreet** provides a database that tends to deal with firm-level data and charges a fee for certain downloaded data. D&B tends to focus more on the financial data of a firm and defines firm and establishment in ways different from the Department of Labor and Census Bureau. Find SIC, total employees, legal status, annual US sales dollar equivalent, and more, plus identify up to four (4) executives on the world's largest entities. Free trail reports are available. http://www.dnbmdd.com/mddi/default.aspx

- **Industry Association Data** is often collected about their members. This information can be very useful, but should be used with caution due to the fact that industry associations may represent only large firms in an industry. Industry information on costs from these sources should be cross-check with other sources. The *National Trade and Professional Associations* publication available through the Library may be helpful in identifying pertinent trade associations to contact for information. A link to a list of some of the Wisconsin Trade Associations can be found at: http://commerce.wi.gov/BDdocs/BD-SBRRB-BusinessAssociations.pdf .